****DRAFT****

Fire Regime Condition Class (FRCC) Interagency Handbook Reference Conditions

Modeler: William A. Patterson III **Date:** 22 October 2004 **PNVG Code: NESP**

Potential Natural Vegetation Group: NE Spruce-Fir Forest (Kuchler PNV #96)

Geographic Area: Maine, New Hampshire, Vermont and the Adirondacks of New York.

Description: Mesic to somewhat xeric sites over a broad range of topographic conditions including ravines, valley flats, sheltered low ridges, open north-facing slopes at high elevations, and steep, exposed slopes. Soils are usually acidic and species diversity tends to be low. The characteristic species are eastern red spruce (*Picea rubens*) and balsam fir (*Abies balsamea*). Common, early-seral associates are paper birch (B*etula papyrifera*) and aspen (*Populus tremuloides* and *P. grandidentata*). Other common associates include sugar maple (*Acer saccharum*), yellow birch (*Betula allegheniensis*), beech (*Fagus grandifolia*), hemlock (Tsuga Canadensis), striped maple (*A. pensylvanicum*), red maple (*A. rubrum*), mountain maple (*A. spicatum*).

Fire Regime Description: Fire Regime Group V. Fire disturbances are severe and affect large patch sizes but are rare, at 150- to 300-year intervals. Fire may occur in the spring or later in the growing season under drought conditions, with the former favoring a pathway to early successional aspen-birch with less spruce-fir regeneration. Wind events, insect attack and ice storms - on a small patch to stand scale - are more important than fire, although they may predispose the forest to fire.

Vegetation Type and Structure

Class*	Percent of Landscape	Description
A: early-seral open	5	Young stands characterized by paper and gray birch, trembling and big-tooth aspen and red spruce and fir in the understory; less than 10 yrs old
B: mid-seral closed	10	Without fire. Intermediate stand dominated by paper birch and aspen with red spruce and fir in the understory; 10 – 70 yrs old
C: early-seral open	10	Following fire in A. Young stands characterized by paper and gray birch, trembling and big-tooth aspen; without red spruce and fir in the understory; less than 10 yrs old.
D: mid-seral closed	15	Without fire in B. Intermediate stand dominated by aspen and birch, initially without spruce and fir in the understory; spruce/fir invade beginning at age 30-70 yrs. 10-70 yrs old.
E: late-seral closed	60	Without fire in B or D. Closed spruce/fir stand 70-175 years. Fir drops out after age 70-100. Following small to large blow downs, regenerates to spruce/fir without fire or aspen birch (A or C) with fire. Spruce budworm also predisposes to fire (A or C), although will regenerate to D without fire.
Total	100	

*Formal codes for classes A-E are: AESO, BMSC, CESO, DMSC, and ELSC, respectively.

Fire Frequency and Severity

	Fire Frequency	Probability	Percent,	Description

Fire Severity	(yrs)	All Fires	
Replacement Fire	175	0.0057	100
Non-Replacement Fire	none	0	0
All Fire Frequency*	175	0.0057	100

*All Fire Probability = sum of replacement fire and non-replacement fire probabilities. All Fire Frequency = inverse of all fire probability (previous calculation).

Assumptions: Lightning-caused fire was rare but more important inland than along the coast.

References

Brown, James K.; Smith, Jane Kapler, eds. 2000. Wildland fire in ecosystems: effects of fire on flora. Gen. Tech. Rep. RMRS-GTR-42-vol. 2. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 257 p.

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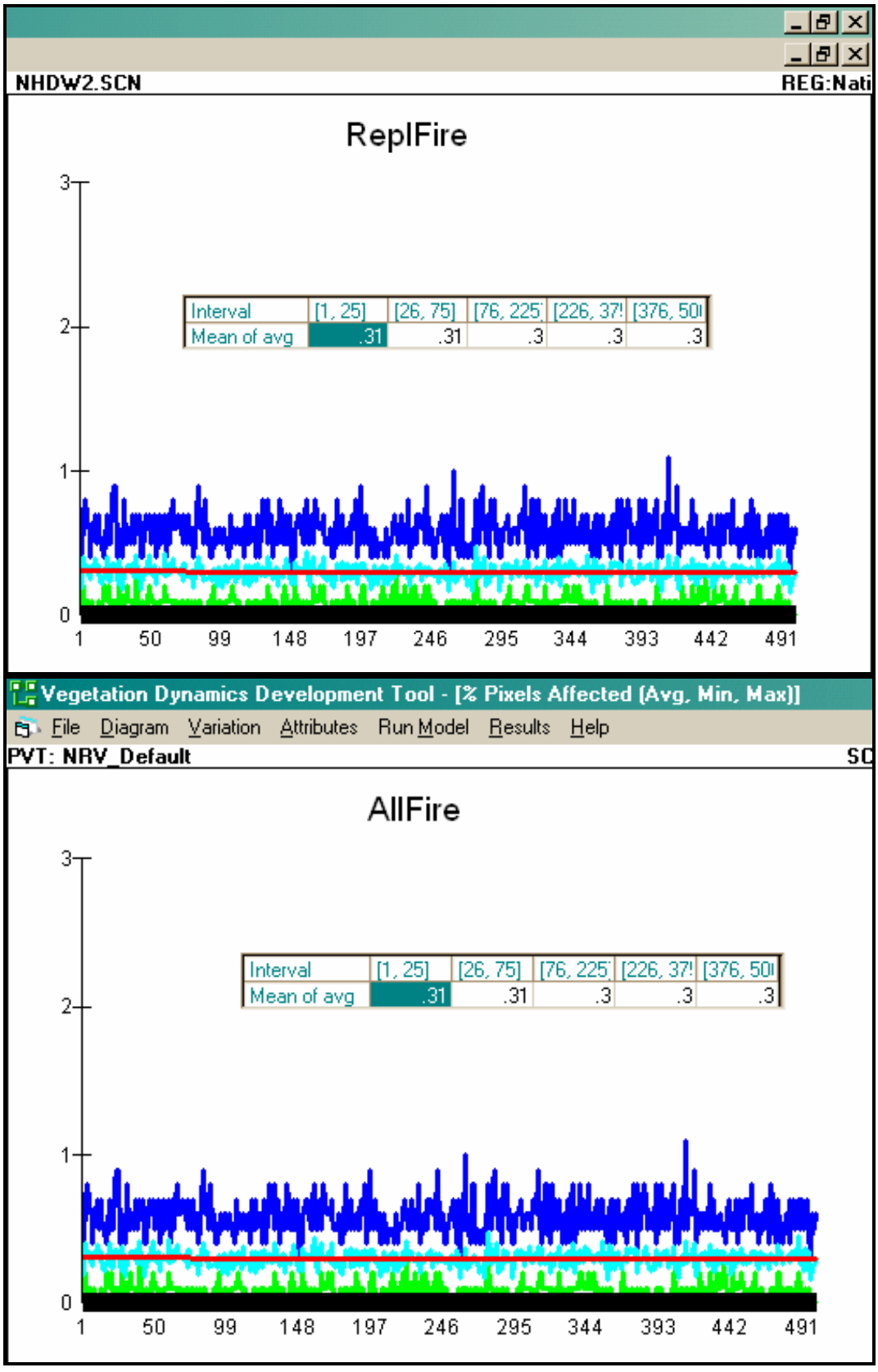
PERSONAL COMMUNICATION (if applicable):

VDDT File Documentation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Run Model
Results
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Mean of avg
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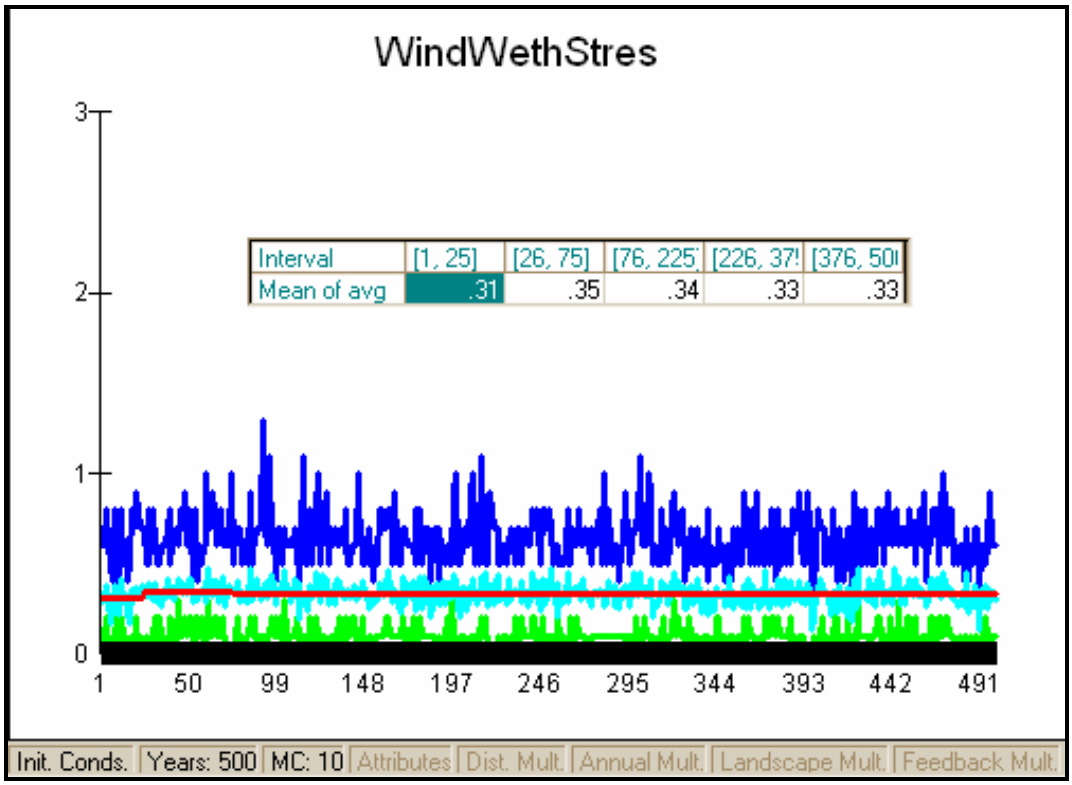
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Landscape Mult.
Feedback Mult.